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Container Traffic in Madras Port

Some Notes on Employment and Unemployment

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EDITORIAL - SOME HIGHLIGHTS

I. General Economic Scene

State

Planning Commission

There was a meeting of the Commission in mid May. The methodology for the preparation of the state's Perspective Plan 1991-2001 was discussed on the basis of a paper prepared by a member. There was broad agreement that the plan should be developed not on the basis of attaining an overall rate of growth but by defining the various targets to be aimed at and attained in each of the sub sectors of the economy. There was also a discussion of the document, Tamil Nadu—An Economic Appraisal 1989 which set forth a review of the economy during 1988-89. It was noted with regret that the document which should have been available to the legislators in March 1989 when the budget for 1989-90 was being discussed and approved by Parliament (the state was then under President's rule), that it was made available over 2 years later. It was pointed out that this important document was never available to the legislators at the time of the budget discussion and approval over the past several years. It was therefore recommended to government to make this document part of the Budget paper-that would give the departments and officers responsibility for preparing it and a firm deadline like the budget and give the document the needed priority in printing and processing the document.

Climate and Prices

May was a hot month—infact is traditionally the hottest month in the year, with the *Agni Natchathiram* appearing during the month. But during this year, May was comparatively mild, never reaching 40 degrees. There were the usual summer rains in some parts of the state, particularly in the southern districts CSO's monthly abstract of statistics for January 1991 (the month following the last issue) has not yet appeared and hence it is not possible to

give the price data for the state in January. Prices, however, in the state, as in all India, are continually on the rise at all levels, wholesale, consumers, agricultural workers and industrial workers etc.

Power

Power supply in May in the state was normal. The coal stock position of the thermal plants improved so that (i) the power cut on HT users was reduced from 30 per cent to 25 per cent and (ii) there was almost no load shedding until March 21 when as a result of Rajiv Gandhi's assassination on May 21, strikes and bandhs reduced coal supply to the power plants which had to go in for load shedding once more. Further at the end of May there was a mechanical breakdown in Singareni which led to a heavy cut in the coal supply to Ramagundam, resulting in reducing of power supply to Tamil Nadu and other Southern States. The Tamil Nadu Energy Board reports that on behalf of the World Bank, BHEL is being commissioned to undertake a feasibility study for a 500 KW solar power station. The plant is to feed the State Electricity grid. For BHEL which earlier set up a 20KW solar station near Hyderabad and completed it in May, a 20KW photovoltaic power plant in Haryana, solar power along with wind power are the 2 non conventional energy sources the R & D centre is concentrating. For Tamil Nadu with its plentiful sunshine for 10 months in the year, the solar station holds promise of meeting its long term gap between power demand and supply. In this connection, the offer of Industrialists from outside Tamil Nadu-Videocon, Tatas, Macneil and Major, Khaitan and Penta have offered to set up power plants. In the state elections under very dry May, all major parties have in their manifesto pledged to help the private sector to invest in power. These promises must now be translated into action. And some of leading Tamil Nadu industries, SPIC, TI groups, TVS, Amalgamation should join in this effort. TNEB announces the setting up of a 1.5 MW windmill power plant near Madurai.

At the national level, power supply was normal in May except for the states, AP, Karnataka and West Bengal where there is a shortage of supply and so have power cuts reported in earlier issues. NHPC reports that the funds crunch has forced it to halt construction at Koel Karo (Bihar), Baglikar and Sawalkat (J&K), Chamera II (HP) and the Satida basin (UP). The funds involved are not much against the Rs. 3300 crores needed for these 5 projects. only Rs. 450 crores have been released. This is an urgent priority for which the balance of funds must be found and released as otherwise these plants which will become operational in the IX Plan will be halted. IAEA reports that against 5 countries generating half or more of their total capacity from nuclear energy sources, India's 7 nuclear power reactors have a total capacity of 1374 MW and the seven further reactors under construction will add to the capacity 1640 MW. At present 2.2 per cent of power generated in the country is from nuclear sources, this limited approach is to be commended, given the risk and costs of nuclear sources of energy.

Water

A World Watch Institute study warns of the serious water situation facing Tamil Nadu in both the urban and

farming areas. Against 110 gallons of water available per capita per day in Los Angels in Tamil Nadu only 8 gallons per capita is made available during summer. There is urgent need for measures to conserve the state's water resources and ensure the efficient use of water. At present there are no regulations governing the amount of water that a farmer can draw from a well, or till recently the water withdrawn for sale by lorries and tanks, so that underground water is available on a first come first served basis. If this continues, the states, underground water resources will be depleted and so there is need for regulation of ground water withdrawal which is being put into effect in some parts of the outskirts of Madras city. Efficient use of water calls for restoration of traditional rain collecting tanks and reservoirs which are in need of maintenance and where the plentiful monsoon rains need to be captured in larger wells and not allowed to runoff. In cities water problems are exacerbated by antiquated or non existent infrastructure (30-40 per cent of water supply in Madras is lost through leaky pumps) that cannot keep up with the population growth. As the states rivers are seasonal and its longest river cauvery has a flow 25 times smaller than the snowfed Ganga and water available and demand vary from region to region (Coimbatore for instance recorded a 16 foot drop in its water table between 1972-1992), there is need for the farming system and the cropping pattern to be adjusted to the availability of water and for water usage to promote methods of consumption.

Housing and Finance

Primer Housing and Industrial Enterprises announces that it is developing mini townships in the state with the help of HUDCO. Its houses in the township are already in wide demand. This would also be a means of decongesting the mega cities of Madras and Coimbatore. On the financial side, the government report that its increased collection during the last quarter of 1990-91 has narrowed the budgeted deficit from Rs. 510 crores (anticipated) to Rs. 200 crores (achieved). The sales tax and the commercial taxes have raised a record Rs. 2167 crores. RBI, however, in its analysis of finance of the state government for 1990-91, which is the first year of VIII Plan, shows that the proposed additional tax and non tax measures cover only 29 per cent of the continued overall deficit of the states of Rs. 2676.4 crores leaving the overall net deficit of the states at Rs. 1901.1 crores. It also reports that of the 25 states, the majority, that is 20 have left their deficits uncovered.

Mapping Resources at the Panchayat level in Kerala

Kerala is undertaking with the help of its experts and professional services like the Centre for Earth Sciences Studies, Kerala, State Land Use Board, State Planning Board and Kerala Sastra Sahitya Parishads, the mapping of the resources available in its 1000 odd panchayat with active coperation and involvement of the local people. When the resources are identified in each panchayat, local level planning will ensure optimum use of available resources. The programme has in all 5 stages starting from the collection of basic data on land use, water resources, soil and ending with preparation and execution of development project. The blend of official expert group and voluntary agencies—from each

ward of a panchayat, 10 volunteers are selected for participation in the collection of data and monitoring the projects—will both make people aware of their resources and promote decentralised planning. Tamil Nadu's Planning Commission is working on a similar programme at the level of district Councils.

National

Plan

Work on the VIII Plan during May was at a low key as it was the month of the elections and the commission stated that it had prepared all the data and documents for the new government to take a decision and move on to the VIII Plan. Its latest estimates report a growing gap during the VIII Plan between demand and supply of commercial energy. It states that gap between demand and supply of crude will widen from 24 million tonnes at the end of the VII Plan to 27 to 28 million tonnes at the end of the VIII Plan. For coal the gap between demand and supply is placed at 1.70 million tonnes at the end of the VIII Plan against the surplus of 0.75 million tonnes at the close of the VII Plan. The peaking shortage of electricity is estimated at 17 percent at the end of the VII Plan and will increase in the VIII Plan as insufficient funds are being provided to the power sector during the plan. In terms of saving of energy during the plan, energy efficiency including substituting natural gas for petroleum products can save 5-7 million tonnes of crude and conservation can save about 5000 MW of power. Further, demand management and increasing programmes such as the 2 IDBI schemes on energy audit subsidy and equipment finance of energy conservation along with the lowering of interest rates on its loans for energy efficient equipment will be needed to meet the problem created by the demand/supply gap. It is also said that the Commision is considering proposing the sale of Rs. 1 lakh worth investments in the public sector to finance the VIII Plan. One further suggestion made by Financial Express gives the fact that the first year of the VIII Plan 1990-91 recorded an estimated overall growth of 4.5 per cent and the second year, 1991-92 is likely to register the same rate, these 2 years can be treated as Annual Plan years and the VIII Plan established for the 5 years 1992-93 to 1997-98. Planning Commission has set up a committee headed by Mr. Rajah Chelliah to suggest a durable solution for the financial position of the 10 special category states.

Prices

In April, the rate of inflation, on the basis of the wholesale price index was 0.6 per cent having risen by 1.2 points during the month standing at 192.4 on April 27. The rate of inflation on a 12 month basis declined from 12.8 per cent recorded in January to 11.1 per cent as at 27 April 1991. But this decline is due to a statistical quirk and does not represent a fall in the inflation pressure. Whereas the January index and that of the last quarter of 1990 recorded a high inflation rate because they were calculated on a low (inflation rate) base for the corresponding period in 1989, and so as was progress during the current year the inflation rate will dip not because there is less inflation but because the base on which it is computed is high. Another factor which will affect the inflation trend

this year is the 1991 monsoon. If it is poor, despite fairly adequate food stocks and the good water levels in the reservoirs, there would be increased inflationary pressure. A further factor which is affecting the inflation rate is the credit squeeze which led to a sharp drop in the growth of money supply (M3) from 9.1 per cent in April-October 1989 to 4.8 per cent in April-October 1990 and an even steeper decline of M1 during that period for 9.2 per cent to 1.7 per cent. The money supply is being further tightened In early May, RBI has instructed commercial banks to maintain, in addition to the Cash Reserve Ratio of 15 per cent, from May 4 an incremental cash reserve ratio of 10 per cent in net demand and time liabilities. Note circulation as at May 10 excecds Rs. 58,000 creres -an increase of Rs. 1676./4 crores calling for the further tightening of money supply. A cut in the fiscal deficit is also needed to keep down inflation but the experience in 1990-91shows that the effec s of such decline in deficit is offset by the raising of administered prices—particularly petroleum and foodgrains. Here it is not excess liquidity or money supply or supply/demand forces but the administered price increases that fuelled inflation. Now the decision on procurement prices for the coming kharif season, normally made in April, to help and guide the farmer on his cropping pattern has not been made, because of the elections and with the postponement of the election to mid June and the possible formation of a new government at June end, it is not till July that the kharif procurement prices will be announced. That is late for the farmer, but there will be a rise in the prices announced which will have an effect on the rate of inflation.

Stock Exchange

The stock exchange in May was rather subdued awaiting the results of the elections. It also was hit by the assassination of Mr. Rajiv Gandhi, the former Prime Minister. Badla rates at first shot up and then declined to the minimum level. The money market reacted sharply to RBIs decision to improve an additional 10 per cent of the incremental demand and time liabilities reported earlier by increasing call rate or 30 to 40 per cent with similar increase in bill discounting rates. Banks and Mutual Funds hiked coupon rates on debentures in May in anticipation of the government freeing debenture coupon rates with a floor limit on ceilings.

Economy

In May in addition to the 10 per cent increase in CRR referred to earlier, RBI in fresh curbs to limit credit expansion to conserve foreign exchange reserves, imposed a 25 per cent surcharge on bank credit for import finance and the freezing of drawals under cost credit limits of Rs. 1 crore and above. It has stipulated that the use of bank credit for those with limits over Rs. 2 lakhs to finance imports should be earmarked under a separate set terms of cash credit limits. Outstandings under this import credit sub limit is to be charged the normal 17 per cent interest plus a surcharge of 25 per cent. After 2 decade of generous lending after nationalisation, banks have now to refuse loans particularly in accomodating clients; despite not having money to lend, they resort to the call money market for cash. Now the slack season credit policy announced by RBI on April 12 and the recent hike in CRR will stop this reprehensible practice. The problem

with the depleting foreign exchange resources (which fell to $905.6 million in January 16), and the draw down on the subsequent IMF loans of $1.786 billion as reported in the last issue and the BOP crisis is traced by RBI in its census of India's foreign assets and liabilities during 1986-88 (according to RBI Bulletin April 1991) to the policies pushed during the VII Plan. On the basis of responses from 1816 joint stock companies, 50 branches of foreign companies, 63 bank and 12 other institutions, the RBI census reports that while India's total liabilities increased by 21 per cent between March 1986 and 1987 and a further 13 per cent by March 31 1988, its external assets increased only by 13 per cent in the first period and declined by 2.6 per cent during 1987-88. The increase in the official sector foreign liabilities was due to outstanding loans from foreign governments and international institutions, while the corporate sector's liabilities increased on account of foreign loans and a higher controlling investment in foreign rupee companies. As the study states 'the increase in India's foreign liabilities was the result of an increase in external debt of the Government of India, foreign commercial borrowing by companies and financial institutions and rise in the balance of non resident accounts and other investment liabilities". This important study and the lesson it conveys for India's foreign financial relations should not have been published with such a long delay. Infact the Economic Advisory Council says that the BOP problem has existed in 30 of the 36 years since 1957-58. The crippling effects of the huge trade deficit of over Rs. 10,500 crores in 1990-91, with a steep rise in the case of imports and a decline in exports, plus the loss of West Asia remittances involved heavy withdrawal from the foregin exchange reserve. One further issue in May. The Finance Minister was right in demanding an investigation into the unprecedented revenue shortfall of over Rs. 1000 crores vis a vis the budget estimate, but equally he should take responsibility for it because of the utter laxity in tax administration, particularly in the last quarter of the year. Actually the fall in revenue collections is more serious than the Rs. 1000 crore gap referred to. Data at the end of May shows that customs revenue will be Rs. 2056 crores against the budgeted Rs. 24000 crores and excise collections Rs. 24,323 crores against the budgeted Rs. 27000 crores. Again while the import curbs may save Rs. 1500 crores in foreign exchange outgo, they will also cause a loss Rs. 1500 crores in customs revenue in the first quarter of the current year. All these need review. In this connection economic activities in the informal or hidden sector could be tolerated if there is no large scale violation of tax laws. In India, even the conservative Acharya Committee report for the National Institue of Public Finance and Policy shows that not only has black incomes become a pervasive part of India's saving, it is the result of large scale tax evasion apart from being the source of wide spread corruption. There is also the capital flight from India in the 1980s which is computed by Meenakshi Rishi and James Boyce at $21.1 billion which is equal to 52 per cent of the aggregate external debt for this period brought about by misinvoicing india's trade with industrial countries. Finally the reduction of the fiscal deficit referred to earlier on the basis of cutting subsidies on food and fertilisers along with raising administered prices, will bring about a decline in production through this macro economic adjustment, resulting in inflation continuing, moving into stagflation for the country. The latest (43rd round) of the

NSS shows that 25 per cent of rural families spend more than Rs. 1000 per month each and 35 per cent of the urban families spend more Rs.1500 a month, another 21 per cent Rs. 500 to Rs. 700 a month and the remaining 29 per cent Rs. 700 to Rs. 100 a month ; in urban areas 20 per cent of families spend less than Rs. 700 a month, 30 per cent between Rs. 700 to Rs. 1000 and 29 per cent between Rs. 1000 to Rs. 1500 a month.

Industry

The industrial growth rate for January 1991 released by CSO shows a slackening to 4 per cent compared to the 12.9 increase in January 1990. This means that the rate of industrial growth for the 10 month, April-January was 8.4 per cent which was better than the 6.4 per cent recorded in the comparable 10 months in 1989-90. The expected government decision to prescribe a flexible interest rate policy for the all India financial institutions will mean a sharp rise in the cost of long term funds to industry, making the long term rate equal to the 17-18 per cent short term rate. In one sense this is a needed correction to the tradition of keeping the administered cost of long term funds far below the short term finance. This will help the financial institution to earn more of an income. This seems to be the result of the IMF/World Bank pressure to liberalise and deregulate the country's financial system. The World Bank report on how to reform trade policy in India and make Indian Industry more competitive provides for, what it calls "one of the world's most restrictive, discretionary, complex and difficult to administer system" a drastic overhaul. It starts with the proposition that Indian BOP crisis is not the result of the liberalisation of trade policy over the past decade but of a high rupee value and large fiscal deficits. So it recommends the devaluation of the Rupee by 22 per cent, cutting government expenditure by 9 per cent, abolishing quantiative restriction on imports, cutting customs tariff from an average of 117 per cent to 20 per cent, jacking up excise duties by over 50 per cent, placing all intermediate and capital goods on OGL first and later also consumer goods. In short, it wants the Indian economy and market to open upto foreign goods completely. It acknowledges that this will involve a transitional cost, including a sharp drop in the production of domestic capital and intermediade goods. Equally serious, it will mean zero growth of the economy for some years—a fact which it does not mention. The trade policy should be reformed but its content and pace should be determined by India in its interest of being a major producer of intermediate and capital goods and that of a growing economy. Finally in May, government lifted the cuts in diesel consumption and provided a 6 per cent growth on that of the previous year. This would help industry and trade to grow during the balance of the year.

Public Sector

In the Interim budget (see last issue), a provision was proposed to disinvest 20 per cent of the public sector's enterprises equity in favour of mutual funds and financial or investment institutions in the public sector. As the government fell shortly after this proposal was made, it was not pursued. The broad consensus of the corporate sector is that the disinvestment of the shares of the PSE, should not be for the sole purpose of minimising the budgetary gap. There is reason in this because raising resourcs

for the budget though such disinvestment means using capital resources directly or indirectly to reduce the revenue deficit which is not a sound principle.

National Production Front

Steel

The country is once more faced with a huge demand and supply gap of pig iron, estimated at 2.29 million tonnes by the end of the IX Plan. This means a very large import of pig iron to mee the demand for this industrial input This situation arises from the decision of SAIL and the Ispat Nigam not to increase pig iron products. Their production of pig iron will be 1.7 million tonnes at the end of the VIII Plan and a lower 1.1 million tonnes by the end of the IX Plan. The reason for stagnant and falling pig iron production by SAIL is because none of its 5 integrated plants wants to produce this low value added product against the high price of steel. TISCO does not produce any pig iron, while Ispat Nigam, the holding company of the Vishakapatnam steel plant will not increase its production from the present low level. This means that the production plans of the 4200 iron foundries in the country which have an annual installed capacity of 2.4 million tonnes will either have to slow down their production plans or import this input. One way out is for the private sector to enter this field and produce the needed pig iron. As of now 74 enterpreneurs have applied for licenses to set up pig iron units and these are being processed by the Department of Steel, which must also ensure that the coking coal needed is made available to approved units. On the steel front, SAIL reports that the production of saleable steel by its 5 integrated plants is doing very well, increasing in April by 15 per cent—Bhilai and Bokaro have taken the lead in this. But the Development Commissioner for iron and steel seems to have doubts about SAIL's optimistic report and states that the target for steel production for the year, 1991-92 may not be attained, with productivity of the primary and secondary units at 14.2 million tonnes against the target of 14.8 million tonnes. Shortoge of raw materials is held to be the reason for the stagnation in stee production around 14 million tonnes over the last 3 years. There is therefore need for managerial inputs in the industry to break out of this stagnating production situation and to replace imports by increased domestic production by both the primary and secondary groups.

Crude

ONGC's task now is to clean up the 700 offshore and onshore wells so that their life can be lengthened and their productivity increased. The rate at which the wells are being shut down is serious and will affect crude supply at a time when domestic production has to be maximised. ONGC in mid May announced that it has struck gas in two prospects—BS 120 and BH—35 in the Bombay offshore area. This is a reminder to the government and SAIL to ensure that gas is not wastefully flared but is used for power plants, factory production and also for urban transport. The government reports that the oil pool deficit account which was Rs. 200 crores in 1989-90, Rs. 1600 crores in 1990-91 will be wiped out this year because of the 25 per cent surcharge (see Vol xxi p87).

Coal

The coal output target for 1991-92 is 203 million tonnes against the 1990-91 actual of 189.64 million tonnes. Asi far as Coal India is concerned, a welcome development is that it plans to achieve 71 per cent of its growth in underground mechanised board puller production. This concentration on underground mining will improve quality of the coal, which all consumers - power plants, cement factories etc are demanding. The Geological Survey of India and the Central Coal Mine Planning Institute announced that as a result of fresh exploration in various parts of the country, they estimate that gross coal reserve has touched 192 billion tonnes. This is the request of using mechanically advanced methods, of survey and remote sensing supplementing conventional methods which have resulted in adding 16 billion tonnes since January 1989. Further of the total explored coal, 78 billion tonnes are in the proved category. Coal should be the major energy source besides the non conventional sources of biomass, solar and wind energy.

Non ferrous

HZL reports that the new lead and zinc smelter at Chandirya in Rajasthan will start production in June. This should improve its consumer services, which the stock point at Indore will promote particularly for small and medium consumers as well as large ones.

Agricultural Production

Earlier reference was made to the possibility of this year's south west monsoon being sub normal. The Hyderabad Meteorological Centre reports hat the SW monsoon moving through the North and South Andamans by May 22-23, South East Bay of Bengal tn May 27-28, Sri Lanka May 30-31, arriving along the coast of Kerala by June 1. This means that the monsoon is on time, whether it will be normal remains to be seen. The importance of a normal monsoon can be seen in the results of field demonstrations which show that farm production can be doubled in rainfed areas with the same level of technology. If there is careful attention to soil and water conservation, water harvesting, appropriate cropping sequence and institutional support, the average half tonne of foodgrains produced on these lands per hectare can be doubled to 1 tonne, apart from raising livestock, grasses and fodder crops and horticulture. Farmers in the North and South are preparing the land for the SW monsoon to develop the varied agricultural production referred to above. The 2 day National Conference of Agriculture in early May organised by the union government and the states has fixed the 1991-92 crop year food grains target at 182.5 million tonnes, against the current year's 174.5 million tonnes. Of the 1991-92 target, 103 million tonnes is to be produced during the kharif (monsoon) season. The kharif target is composed of 68.8 million tonnes of rice, 28.5 million tonnes of coarse cereals and 6 million tonnes of pulses. Taking note of the Indian Meteorological Department's prediction that the 1991 monsoon will be below average, it was decided that a number of bumper crop correction exercises according to the actual rainfall are to be undertaken. The government announced in May that it has decided to wind up the Standing Advisory

Committee in Agriculture, chaired by Sharad Joshi as it had completed its task of preparing the Agricultural Policy Document. Mr. Joshi disagrees with the decision because he feels that Agricultural Policy is not yet finalised on which there are differences with the Ministry and in any case the committee was constituted to advise the government on a continuing basis on the formation for implementation of agricultural policy.

Foreign Trade and Balance of Payments

DGCI & S reports that the trade deficit for 1990-91 is a massive Rs. 10,643.84 crores (compared to 1989-90's Rs. 7730.41 crores)—with exports at Rs. 32,527.28 crores (growth of 17.5 per cent in rupee terms and 9 per cent in dollar terms) and imports Rs. 43,170.82 crores (growth of 21.9 per cent in rupee terms and 13.1 per cent in dollar terms). This growing trade deficit is the key to the Balance of Payment problem that we face—Rs. 616 crores per month in 1988-90 against Rs. 900 crores per month in 1990-91, Rs. 4110 crores in April and Rs. 2507 crores in May 1991. The sharp import curbs announced by RBI referred to in the last issue on the further curbs including the moving of the interest rate reported in this issue will cut the trade deficit in the short run. But the major factor in our import bill—the costly import of crude which rose from Rs. 2811 crores (14.6 per cent of the value of total imports) in 1986-87 to Rs. 6,274 crores in 1989-90 (17.7 per cent of aggregate imports) remain untouched. There was some panic buying of oil during the Gulf crisis which should be avoided. There was need for restraining consumption and not pondering to consumers demands and desires at the cost of the country's meagre foreign exchange reserves. Other imports which have contributed to the trade deficit and BOP problem are fertilisers (5 per cent of total imports), edible oils etc which can be pruned. On the exports side, the record is not good and its contribution to the trade deficit should be corrected. Exports fell short of the target by as much as Rs. 3500 crores. Textiles and leather goods have shown a high increase in exports at Rs. 8397 crores over the previous year, led by readymades. Printed Circuit Boards are being imported to encourage export of consumer, electronics. Also exports of agricultural commodities increased by 29 per cent-mainly cotton plantation crops exports. Engineering goods only just hit the target, gems and jewellery record a decline. There was also a large fall in consultancy exports. But really what is missing is an export direction and policy. The growing import intensity of exports has contributed to the BOP crunch. A recent PTI survey shows that value of import licenses granted to registered exporters has risen from Rs. 2487 crores in 1985-86 to Rs. 10,536 crores in 1989-90. For every Rs. 100 worth export licenses, as much as Rs. 60 is granted to registered exporters as incentives for export promotion. REP license to 9 thrust export sectors has increased from Rs. 1170.2 crores in 1983-84 to Rs. 1414.6 crores in 1988-89. CCI for exports which a study shows as being more effective in pushing exports than the REP or duty drawback scheme, rose from Rs. 893.4 crores in 1986-87 to Rs. 1536.4 crores in 1988-89. This is too high a cost to service our exports. Why was not the creation of large viable capacities in the domestic sector created to promote export surplus. Government policies despite all the liberalisation still do not let global capacities to come up in many

sectors. At the end of May because of the foreign exchange crunch, the government has tightened machinery imports against textile exports. India will lose exports to the European Community, if it is not able to cater to the 30,000 specification written down by it. Instead of the export policy direction, ad hoc decisions are being taken which only worsens the trade deficit and BOP crunch. Because of the foreign exchange crunch and the squeeze on exports, the availability of some non ferrous metals has shrunk and their prices have begun to sky rocket. In just 4 months since January their prices have risen by 20 per cent. Here again MMTC's imports and the grant of REP licenses should be directed to address the shortage of the metals. The BOP and fiscal deficits over the year, particularly the last 4 years have accerbated India's indebtedness—both internal and external. An RBI study places India's bilateral liablities at $37 billion or Rs. 100,000 crores (it is much more if all liabilities —short term and long term are included). The cure for this is to expand exports and tone down the BOP crisis. There is little time to lose on this.

Aid and loans

In May, the informal meeting of 6 countries making major loans to India the World Bank and IMF agreed to help India tide over its BOP crisis by making available the necessary shory term credit. But the World Bank has warned the government against rolling over continuously the country's external debt. This rolling over of the public debt by the government which has been followed for some years increases the rupee cost of interest payments and the capital loss on the principal outstanding as a result of the rupees' exchange rate depreciation. The World Bank has made a loan of Rs 150 crores for the Karnataka Electricity Board for streamlining the transmission and distribution of power. Further IDA approved a credit of $ 130 million for dam safety in the Central Water Commission. ONGC has applied for a World Bank loan of $ 200 million for financing its gas flaring reduction project in the Western offshore area. ADB states that it is setting up a 12 nation Indian Equity Fund to mobilise investments in equities of Indian companies. Japan and ADB are extending emergency loans of $300 million in May to help the country in its current financial crisis. In addition ADB has sanctioned a loan of $150 million to help India buy crude oil and patroleum products. Japan has also cleared an energy loan of $150 million to India to help it meet its present financial crisis, pending long term accomodation from IMF and the World Bank. CESC has signed an agreement with ADB for a loan of $17.8 million for its electricity project. In May there were a number of bilateral financial dealings with Germany. To start with, Germany is concerned with the fact that projects worth Rs. 374.82 crores for which it has extended loans and credit are not using the credit, in some cases for over 10 years. Germany has warned if these inefficiences in project execution continue, Germany loan may be cut. In May it has offered DM220 million (Rs. 253 crores) for quick disposal on projects in response to the decision of the informal meeting of the consortium referred to at the start. It has offered a loan of Rs. 212 crores to help the power sector this year. For 1991-92, it states that it will make available for Rs. 400 crores including repayments of Rs. 186 crores from the previous years unused

credit. It is also making a technical cooperation grant of Rs. 46 crores. Also in May the Netherlands made a loan of $80 million for rural power development. Thus May was a month when external credit and loans were tapering of or made available on temporary or stand by basis. There is need for the whole policy on external finance to be reviewed and a policy in line with the overall economic policy of the country to be developed anew.

Foreign debt

The World Bank places India's external debt in 1989 at $562.509 billion. It was $7.937 billion in 1970. Its world Tables show that the foreign exchange crisis began not with the Gulf war but after 1987 when there was no external crisis. In 1987 India's international reserves excluding gold was $6.454 billion and gold $4.267 billion. In 1988 they decreased to $4.899 billion and $4.286 billion. In 1989 they further decreased to $3.859 billion and $4.190 billion. IFC notes that in December 1990 Indian foreign exchange reserves was enough for only 3 weeks imports.

International

World Bank/IMF

The interim committee of the IMF and the Development committee of the Bank met in Washington on the last 2 days of April. Its main issue was doubling of the capital of IFC to $2.6 billion which was not resolved mainly due to the US refusal to support the move. There was also pressure from members of the committee from developing countries, led by India, for an increase in SDRs in order to increase world liquidity. But this was firmly opposed by the US supported by other industrial countries. So the issue is to be studied further and is postponed for a future meeting. It is reported that there seems to be a consensus at the meeting on a wide acceptance of IMF conditionalities and the World Bank's structural adjustment programmes (to which an earlier issue of the Bulletin has called attention see (Vol XXI p162 and the next issue). The Head of the Bank and Fund ascribe this to the fact that more and more developing countries are accepting this prescription as good policy. This is highly doubtful because the cut in subsidies, welfare expenditures and budget deficit which the countries are forced to accept to get the badly needed IMF/World Bank loans involve the countries in a good deal of popular agitation and resistence. The two agencies will be making a mistake in basing their policies on the assumption that their programmes are acceptable to the countries.

World Debt and World Economy

On the question of world debt, the prescription of the World Bank and IMF have not relieved the problem in the countries facing heavy debts. For sub Saharan Africa, the debt—GDP which has become 100 per cent resulting in negative growth rates. In South America, Brazil's debt of $71 billion in 1980 became $123 billion in 1990 despite the Bank/Fund Brady remedies. There is one way out shown by the lending countries who have written off half of Poland's debt, which has enabled Poland to overcome its problems of transition from communism to capitalism. Why cannot this remedy be applied to the

external debts of the countries of Africa and Asia? Without the partial cancellation in debts, these countries will not be able to service their growing volume. On the world economy, a report on world economic prospects, the World Bank states that the growth rate of South Asia which recorded an average of 5.4 per cent in the 80s will slow down in the 90s due largely to India's current economic difficulties and political uncertainties. It states that the economic downturn in India was compounded by macro economic imbalances and difficulties in BOP, adverse crude prices, high interest rates, availability of capital and recession in the industrial countries. For India future porgress will depend on correcting its macro economic imbalances and undertaking "structural reforms" which is the Bank's panacea everywhere. Sub Saharan Africa is the other region facing a gloomy future, with per capita income growing at 0.5 per cent annually over the 90s. It points out that a rise in international interest rates by 1 per cent will slow down growth in the developing world by 0.2 per cent and 0.4 per cent is highly indebted countries (in which category India falls in the 90s). On the other hand a 1 per cent rise in the growth rate of industrial countries will raise the developing countries growth rate by 0.5 per cent. From this point of view, the World Bank states that the people of the third world will earn a little more in the 1990s because of a rise in the US economy. The World Bank's study of the world economy states that good economic management can double per capita incomes in developing countries. But this also depends on (a) a successful outcome of the Uruguay round, (b) a return to solid growth with price stability in industrial countries, and (c) the reinforcement of international trade and foreign investment in developing countries. The IMF in its latest report on the world economy states that the global economy which had grown by 3.2 percent in 1989 declined to 2 per cent in 1990 and will decline further to 1.2 per cent in 1991, after which it will pick up. Most of growth in 1990 and 1991 is due to Europe and Japan, much of it originating from domestic demand and not from their contribution to world trade. Since industrial countries contribute more than three fourths of the World GDP, any fall in their growth gets translated and magnified with regard to the developing coun-in tries. The upward movement of the world economy in 1992 will be due to the US, (which accounts for one fourth of world GDP), whose growth will be 2.7 per cent in 1992 compared to 0 2 per cent 1991. Japan will growth at a higher rate but Germany burdened with the problem of Eastern Germany will not make a contribution to world trade and development. The best performance will come from the Middle East which will register a high 8.5 per cent in 1992 (doubling its 1991 rate). The current balance of payments, in 1991 will improve for the US because of large Gulf War payments made by Germany and Japan, reducing their current account surplus The rate of inflation will decline from 4.9 per cent in 1990 to 3.9 per cent in 1992 and for the developing countries which was 90.3 per cent in 1990, will be 40.9 per cent in 1991 and 81 per cent in 1992.

New Measure of GDP

UNDP has devised a new method of measuring GDP, based on the UN International Comparisons Projects (ICP) which has developed an internationally comparable scale using purchasing power parities (PPP) instead of exchange rates as conversion factors and expressed in

international dollars. The usual World Bank and UN system uses the official exchange rate to convert national currencies to US dollars which however, does not measure the relative domestic purchasing power of the currencies. Using the new measure PPP, India's per capita income is not $350 as shown in World Bank tables but $70. Pakistan's per capita income is not $370 but $1790 and Sri Lanka $2000. (Bangladesh is $730, Nepal $770 and Bhutan $750). Knowing at the first hand the level of living of the people of these countries, to place Sri Lanka and Pakistan in middle income countries is nonsense, and shows up the error in the methodology. The conclusions of PPP are also contrary to UNDP's own finding, using the Human Development Index which places India above Sri Lanka, Bangladesh and Pakistan. According to the index, Swaden is at the top.

World Trade

GATT in its latest report states that in line with the forecasted decline in GDP in 1991, world trade will decline in volume for the third consecutive year falling from the high 9 per cent in 1988, to 7 per cent in 1989 and 5 percent in 1990. In 1991 there is further fall despite the fall in the post Gulf crude prices from $75 to $20 per barrel. The economies of US, Japan, Western Europe and Eastern Europe and USSR have slowed down, despite the reconstruction activity in the middle East and Eastern Europe. Gulf crisis played little role in slowing trade expansion, this slow down in 1990 world trade being due to the US and Europe. Much of West Germany's production was consumed by East Germany and so West Germany's export volume was reduced. While the volume of trade rose at a lower rate in 1990 compared to 1989, because of the depreciation of the US currency, the value of trade increased by 13 per cent in 1990 against 7.5 percent in 1985. West Europe registered the best performance at 20 per cent expansion, EEC and EFTA each registered 20 per cent increase, with unified Germany surpassing US in total exports. The share of the industrial world in world trade was 79 per cent, that of developing countries was 13 per cent, with the countries of OPEC rather than South Korea and East Asia leading the trade. On the Uruguayan round, the world conference on religion and peace calls attention to the human rights dimension of the negotiation and points out that the liberalising of trade in audio visual material and other products (the so called intellectual rights) could result in countries losing their cultural identity. In the US there seems to be a consensus that multilateral free trade and GATT have become increasingly irrelevant, with the slogans coined by intellectual leaders (MIT etc.) that 'GATT is dead, that "free trade is passe' that "GATT does not matter any more" The political leaders including the US trade representative Ms. Carla Hills do not think GATT is relevant to US development—all despite the fact that GATT is based on a convention and not on a charter like the UN and special agencies. Fair trade so called is replacing the need for free trade because fair trade has become a convenient euphamism in the US for managed trade.

World Poverty

The World Bank's poverty reduction strategy seeks to create the policy environment favourable to the private

sector because it states that the vast majority of jobs for the poor are provided by the private sector and so it wants even the social services to be extended to the private sector. It wants public resources to be freed for social service, activities—primary education, basic health care, family planning and nutrition—which could be operated by the private sector. It estimates that some 1.1 billion people in the world live in absolute poverty and atleast 700 million will continue into 2001. The Bank proposes to design an analytic framework which will be assessed by it periodically as the base for advising government on poverty reduction with the role of the private sector, which is the major preoccupation of the Bank. A study by the journal, International Health and Development asks why is that despite spending $48 to 60 billion each year, poverty in the third world is worsening. Its answer is that this is because a great part of the 'aid' is being spent not in the developing countries but in the West, in large salaries of UN bureaucracies and consultants, the high prices of the western equipment and large wasteful projects thrust on the countries, like fish production project in Mali at $2000 per annum while per capita income is $400 a year, a grain silo in Egypt which had no power, massive population transfers in Brazil and Indonesia etc.

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II. Agricultural Development in Tamil Nadu

Paddy and Other crops

The farmer have completed in May their samba harvesting which has yielded 10.71 lakh tonnes in procurement operation by the Tamil Nadu Civil Supplies Corporation. Thanjavur farmers lead the 8.86 takh tonnes of paddy, though as pointed in the last issue the area under cultivation was smaller due to the limited rains and the non opening of Mettur. Farmers in Pudukottai district contributed 47,000 tonnes. The farmers in all districts have had to be contend with drinking water supply and so have had to reduce the land under paddy cultivation. particularly under kuruvai cultivation. Whereas normally, their paddy production was 20.7 pet cent from Kuruvai. (10.75 lakh tonnes), 68.3 per cent under samba (34.15 lakh tonnes) 11 per cent under summer paddy (5.5 lakh tonnes), this year the farmers had to reduce their kuruvai production at 6.02 lakh tonnes (10.55 per cent), expand their samba cultivation to 45.24 lakh tonnes (79.31 per cent) leaving little over 10 per cent (5 lakh tonnes add) to summer cultivation. With this shortage of land available for paddy, the total paddy production has however not fallen, due to the farmer's various combination of water, fertilisers and seeds to raise the production per hectare, making him stand third in the country, after Punjab and Haryana. Some of the paddy land is being diverted by the farmers to sugarcane, in which he stands first in the country in producing the higher cane yield per hectare. This is a negative trend which the paddy price policy should correct. The cotton farmer

is also doing well, with the same cotton area year after year but cotton production rising to 2.61 per cent a year, giving him the fourth place in the country. The oil-seed farmer like the paddy farmer also faces a shrinking area of cultivation by over 8 per cent annually. But his production per hectare in groundnut, gingelly, castor and coconut is good, giving him the second place, is declining.

Research results

Of the 39 research reports recorded in May, are of particular importance as they can be transferred forthwith to the farm. Two reports from TNAU and ICRISAT on soil solarisation—as a cheap, easy and non hazardous technology have been shown to increase crop production through control of plant diseases, dematodes, weeds, improving soil nutrient status and early seedling vigour. Similarly the other demonstration has shown that soil solarisation arrests plant pathogens attacking redgram and bengalgram. All that is needed in this state with its plentiful sunshine for 10 months in the year is for the farmer to use a thin transport plastic sheet. Farmers should be encouraged to use this technique. On rice, two reports from AP Agricultural University and UAS Bangalore show that the small farmer can use the power tiller mounted paddy transplantation and the vertical conveyor reaper developed by the farmer agency. This reduces the cost of reaping paddy from Rs. 300 per hectare to Rs. 167. Similarly the Bangalore Institute is making available to farmers a new rice variety, R 64 which gives 6.8 tonnes during summer and 6.2 tonnes per hectare during kharif. Farmers are ready to use this high yielding variety. Third, a series of reports from ICRISAT of the farmer controlling various diseases dealing with chick pea diseases, from TNAU on management strategies to control sesamum diseases, from the Agricultural Research station, Bignaer and Agricultural Research Station, Kollikulam on the measures to check leaf spot and the phyclody disease in green gram, from the Agriculture Research Station, East Godavari on the planting practices to avoid phyto-pithera fruit rot in coanu—are all ready for immediate use by farmers. Fourth, the Kottayam station is now making available the 4 control measures to counter various diseases in vegetables which vegetable farmers are waiting for. Fifth, ISR Lucknow has developed a herbicide to check weeds which is a rate of great loss to sugarcane farmers and which they are waiting for. Sixth, the Madras Veterinary college has developed control measures against the blue tongue viral disease threatening sheep, including water management and inactivated vaccines. The states cattle farmer can use this remedy to save the spreading threat to their sheep population. Similarly the work of CIFA Bhuhaneswar shows fish farmers how to control two serious fish diseases—EUS and UDS—attacking inland fish in wells, tanks, ponds and paddy fields, starting with stopping the inflow or outflow of water, reducing feeding, and using easily available drugs according to stated direction.

Tea

Tea exports in 1990-91 are reported at Rs. 1045.41 crores against Rs. 862.42 crores in 1989-90. The unit value realisation has increased from Rs. 43.18 per kg to Rs. 52.59 per kg. The fact that

in terms of quantity, the 1990-91 exports were only 199.48 kg. against the previous year's 202.81 million kg. shows that the higher value—total and unit—realised in 1990-91 was due to the rapid depreciation of the rupee. With the increased domestic consumption, at 4.8 per cent per annum and production increase at 2.7 percent per annum, attention for the future should be concentrated on value added tea exports such as packet teas, tea bags and instant tea as well as intensifying the programme to increase the production of tea.

Coffee

Coffee producers are facing considerable difficulties and many problems as a result of the low MEP and the falling prices being realised. Some estate owners have cut back their production and are selling at whatever price is offered. To save the coffee crops and help the coffee dealers the Coffee Board needs to consult them, and the government and financial institutions must take some short term measures. A major problem facing the coffee growers is the various diseases and pests attacking the coffee plant—the berry borer, the white stem borers as well as the need for HYV strains. All this points to the need for the Coffee Board to concentrate on R&D against coffee pests.

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III. Industrial Development in Tamil Nadu

Industrialisation of Tamil Nadu

In May the industrialisation of the state continued with many positive and some negative developments. Among the positive features, *first BHEL* is to check the feasibility for a 500 KU solar power station as referred to earlier. This will certainly help provide power on a less irregular base. *Second, Tamil Nadu Minerals* is setting up a benefication plant for upgrading the carbon content of graphites costing Rs. 15 crores, the project will go on stream by end 1992. In addition, Tamil Nadu Minerals has decided to set up 2 projects at Rs.50 crores each for granite cutting and polishing. The two units are to be export oriented. *Third,* the financial institutions have decided to increase their investment in *Tamil Nadu Petro Products* to 40 per cent which is not a real inerease in the company's resources, as the financial institutions are exercising their option of converting their loans into equity. *Fourth,* it is good news that *Tamil Nadu's Flourine and Allied Chemicals* has after some years of losses recorded in 1990-91 a profit of Rs. 1.67 crores through its record turnover of Rs. 31.86 crores. *Fifth, SPIC* together with Tamil Nadu Petro Products just referred to announces that this joint sector company is raising Rs. 90 crore through the issue of coupon bonds on rights basis. This is the fourth company in the country and first in the state to use this new financial instrumentality. *Sixth, TIDCO* has advertised in all the journals that it is disinvesting in 5 companies involving a gross capital of Rs. 115 crores, 2 cement units. I asbestors sheet company, 1 asbestors pressure pipe

company and 1 stone ware pipe company. This involves its disinvesting its holding in Tamil Nadu Cements (TANCEM) and Tamil Nadu Explosives (TEL), the former with a paid up capital of Rs. 12.36 crore and the latter with Rs. 5.17 crores. This is in line with the policy of the state government pulling out of industrial activities and encouraging the private sector to take on the responsiblities. *Seventh MALCO,* which is the smallest of the 3 private sector aluminium producer in the country and which is on the sick list being dealt with by BIFR is not to be nationalised, but on the contrary has been attracting private bidders who include RPG Enterprises, Essar Shipping, Larsen and Toubro—who are all interested in making the unit an export oriented one. *Eighth, Farm Implements* is expanding its production and is planning 100 per cent indigenisation of its machinery. When it started in 1985, it bought from Denmark the drawings and designs on the concept of rotary cultivating methods as a one time operation. Its import content which was 90 per cent in 1986 is now 15 per cent, which is to be dispensed with as the company expands its operation. *Finally,* the state government is entering a really risky field—the mining of gold from the gold depots located near Krishnagiri. The potential is rated to be 1.3 to 5.5 grammes per tonne to a depth of 45 metres. This is about 1/3—1/4 the potential of Kolar Gold Fields and might well be left alone. It has been placed as the last item in this list, because it is doubtful whether this gold mining venture is sound and really needed.

On the *negative side, first the Tamil Nadu Electricity Board's* inadequate supply of power to the state's industries is continuing. The problems faced by industries are low voltage, poor maintenance, the failure of the ring main system and the units suffering particularly in the state's backward areas which were wooed there with many promises of continuous power supply. *Second* and related the project for the private sector electricity unit based on *Jayamkondan* Lignite now appears to be a non starter. Inspite of all the promises and rhetoric on private sector participation in electricity generation, the union government has not approved this proposal. There is the further obstacle of the union government not approving private sector entering into lignite mining. It is to be regretted that, these two problems —of the private sector operating an electricity generating plant and using for this purpose the lignite at Jayamkondan was not earlier settled. Now it is advisable for the project to be started with purchase of lignite from NLC or coal from CIL, following the Maharastra pattern where 4 private sector electricity units are in operation. *Third, MRF Finance* has been condemned by MRTP for falsely allowing advertisements for the purhcase of care—offering loan of Rs. 70,000 to Rs. 1 lakh repayable over 2 or 3 years. The misleading part of the advertisement was its promise to deliver any number of cars within 24 hours—which MRTP pointed out is false for Maruti has a 6 month waiting period and so have NE-118 and Contessa classic. This is only the tip of the ice berg for many units are involved in this kind of false advertisement. *Finally,* the southern states including Tamil Nadu are at a disadvantage as far as their investments are concerned : in Andhra, union investment has increased by 0.1 per cent and in Tamil Nadu by 0.5 per cent, in Kerala the level is maintained at 1.6 per

cent and Karnataka at 2.5 per cent, now down to 1.7 per cent. The share of Maharashtra, UP, Gujarat are already large and rising rapidly. This kind of comparison is discouraging to the industrial development in Tamil Nadu.

As in the previous month, the positive features of the state's industrialisation are larger than the few negative features. On this, the future development can be built, avoiding the errors pointed out.

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III. Education, Science and Health

Educational Reforms

The increase in the provision of primary education particularly in the over 2000 habitations which do not have a school within 3 kms is proceeding apace. Simultaneously the mass training of teachers during the summer holidays is being completed to enable teachers to teach according to the new curriculum. The vocational stream at the plus 2 level is being expanded to meet the demand for vocational training after high school completion.

In Tamil Nadu, the government under President's rule has approved the setting up of 2 arts and science colleges, which needs to be reviewed in view of the growing educated unemployment in the state.

Adult literacy

Some 4 states and I union territory are following the Kerala model in aiming at 100 per cent literacy for some selected districts in the state and for all of the union territories of Pondicherry within the year. In Tamil Nadu, 2 districts—Kamarajar and Thanjavur,—have launched a total literacy programme to be attained within one year.

Science

The president of ICSU, Prof M. G. K. Menon, calls attention to the fact that global cooperation in space sciences envisaged in the early 80s has not really occurred. The 1982 UN conference in SPACE in Vienna on the basis of then existing cooperation made plans for the use of space sciences and related technology to push forward the economy of developing countries and called for a budget of $1 billion for this proposal. Today not even 5 per cent of the budget has been subscribed making the realisation of the plan impossible. In addition there has been all round commercialisation of space technology by the industrial world. In the field of communication, the USINTELSAT has used an estimated $10 billion. In remote sensing, which is of vital importance to the developing countries, the 80s represent a set back as it has been used not to map resources for economic development but for military spying. India (with China) launched its own space programme together with indigenous satellies, but is now limping along, as the USSR's space services on which it depen-

ded have become equally expensive. A centre for Asian Science and Industrial Policy Research is being set up in Delhi in order to develop cooperation among Asian countries and evolve a collective science and industrial policy. Its plans include encouraging research in areas of big science, high technology and Industrial development. The centre is also preparing a data bank of technological and industrial activities and capabilities within the Asian countries and to analyse and assess existing plans and programmes in this area. At a time when 3 Asian countries have been placed under Special 301 as noted earlier, it is important that the Asian countries, instead of wasting their limited scientific resources by competing with each other in defence and industry and buying western technology at a high price, should create an open market for their technologies as the European community is doing. This the New Delhi centre can help to generate.

Health

In the health field, the family welfare programme in the state is being geared to promote the healthy baby concept which will ensure that the babies will be 2.5 kg at birth, which will a) reduce the health problem of low weight babies, and b) reduce the infant mortality rate (IMR) to 60 per 1000. The programme also includes raising the age of marrying above 20 years and makes known the disadvantages of pregnancy before 22-23. The data shows a clear relation between cervical cancer and birth of 3 or more babies per mother. The data also shows that slum women get married at 17/18 and that their child bearing cycle goes on till 33/34 years. The programme will try to reduce this 15 year "span of fertility to 7 years". In the state, it was noticed that there was a sudden rise in the birth rate in 1989 by 0.4 points, resulting in the birth of 1.8 lakh additional babies. While the reason for this spurt is being analysed, the family welfare programme particularly in the slums is being intensified so that IMR which was 68 in 1989 could be brought down to 60 by 1992. This calls for maximum involvement of non governmental agencies and voluntary organisations.

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V. Employment and Labour Relations

Unemployment is on the increase because of the high growth rate of population outstripping the growth rate of employment generation. Population according to the 1991 census has grown by 23.50 per cent in the first 10 years 1981-91, while employment in the organised sector during this period has risen by 5 per cent. An analyses of the last 4 NSS rounds, 28th, 32nd and 43rd (in 1992-93, 1977-78, 1983, 1987-88) shows that 56 per cent of the workers are engaged in self employed activities, and 30 per cent as casual labour. Using the census data, it is estimated that 80 million will enter the labour force in the VIII and IX Plan and if 56 per cent of them are to be helped in their self employment activities and 31 per cent

as casual labour two action are needed : a) credit must be made available to the self employed *promptly* when they need it and at low cost, that is low rates of interest and b) the minimum wages must be set by government and enforced by it at an average of Rs. 15 per day. The Planning Commission wants employment generation during the VIII Plan to be 3 per cent per annum during the plan period. The National Science and Technology Entrepreneurship Development Board (NSTEDB) reports that through its Mass Employment Generation through Science and Technology (Megsat) it has created 10400 jobs in 1990-91 against the target of 10,000 jobs which is believed to be realistic and feasible. On child labour, the Central Advisory Committee on child labour has asked states to take concrete steps to prohibit the employment of children in occupations which have been banned : that as the root cause of the employment of children is socio-economic compulsions (poverty of parents), there is need to apply the principle of equal pay for equal work for child and adults and that cost effective projects should be drawn up and funds mopped up from various sources to have a common pool for the child labour project. Now the problem is to ensure implementation of even those half way measures. The situation of child labour in the states is really appalling, as the intervention and judgements of the Supreme Court from time to time show. Among child labour, some 1.25 million children are destitutes, needing homes. As it is felt that poverty cannot be abolished quickly, child labour will persist, all that can be done is to regulate the practice of child labour. While this may be a practical policy, which even as is not being followed, We should always keep before us the ILO convention of 1973 abolishing labour by children. When can we implement it?

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VI. Other Items

Mass Action for National Regeneration

There was a meeting in early May of the southern coommittee of the Mass Action for National Regeneration. The revised curriculum for the first semester this summer of the Anna University and that for the Madras Christian College which is being reduced to 30 day this year were discussed. The state is now set for their implementation and for the July meeting of Vice Chancellors and Principals of Autonomous colleges.

TNSC S & T Workshop on Health

The Tamil Nadu State Council of Science and Technology and the State Planning Commission organised a workshop on the S&T inputs needed in Health. The workshop attended by the state's top medical practitioners, medical scientists and administrators noted the need for updating the science knowhow of the busy general practictioners, the medical and para medical workers in rural dispensaries and health centres and the need for continuing and continuous inservice training in medical science and the

updated technology for all medical scientists.

Islamic cultural foundation

The Islamic cultural foundation and the Social Aid Society jointly organised a felicitation function for Mr. Habibullah Badshah, the newly appointed Advocate General of the state. There was general agreement that with the excellent legal background, his personal qualities of integrity and fairness and his concern for those in need of legal help from the poor sections of society he brought to this important post rather unique qualities. A hope was expressed that he should continue as Advocate General when the new state government is established.

SRC-TNBCE

A meeting of the building committee of the SRC and TNBCE was held at the end of May at which 'the union government's executive engineer examined the 3 contracts which had been submitted for the construction of the new Headquarters of the 2 organisations. The engineer advised that the earth and ground soil should be examined by an expert and gave two names of persons who could do it. The architect who had examined the 3 contracts recommended the tender offering the lowest quotation which was accepted.

IIC

The monthly panel discussion on Social Development in the National Plan and economic development was organised at the end of May. There was agreement that there was need for examining the definition of social development. The importance of education and health which are given a low priority in the Plan was recognised. The key to social development was the education of girls and women which should be given top priority. On the next day, there was a workshop on alternative paradigms of development. Various models—Socialist, Communist, Gandhism were examined. There was agreement that the present system was not working well and in particular it has not addressed itself to poverty of the more than half the people and inequality of society. Here again the use of education and health as the key to correcting these defects were underlined. There is need for both opening up of the market and state interventions on matters affecting people. It was suggested that some of the important issues referred to should be pursued in smaller groups.

June Development Seminar

The paper for the June Development Seminar on 'Container traffic in Madras Port' by Paul P. Appasamy and Anand Kumar Thiyagarajan along with the Summary of Discussion of the paper at the seminar appears as the first article.

Second Article

An article, Some Notes on Employment, and Unemployment appears as the second article.

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M I D S News

Dr. Nirmal Sengupta had a Meeting with Secretary, Rural Development on 26th June, 1991 regarding a Wasteland-Watershed project.

He also attended a training conducted at LBSN Academy Probationers on (a) Poverty Alleviation Programmes and (b) Participation and Co-operation.

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Mr. S. Guhan attended the Assocham Workshop on Economic Agenda for New Government.

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Dr. A Vaidyanathan attended a Meeting of the Expert Group on Estimation of Poverty, Planning Commission on 8th July.

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Dr. S. Neelakantan attended the Selection Committee Meeting at TNVAAS University, Madras on 4th July.

He was the External Examiner for the Ph. D. Viva Voce Examination of G. Leonard held at St. Joseph's College, Tiruchirapalli on 8th July.

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Dr. Chendroyaperumal, Faculty Member of National Institute of Port Management, Madras gave a lecture on "Half Arrow Technique for Communication in Economics" on 10th July.

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Monthly Seminars 1991

Month		*Title*	*Author*
August	—	Services and Uruguay Round	B. S. Raghavan
September	—	Power situation in Tamil Nadu	M. G. Devasagayam
October	—	Study of Perceived and actual Crime in Madras City	A. Sivamurthy
November	—	Externally Aided Projects in Tamil Nadu	N. Narayanan
December	—	Labour Law and Trade Union	Babu Mathew

Container Traffic in Madras Port

by

Anand Kumar Thiagarajan

and

Paul P. Appasamy

Introduction

Madras Port was developed by the British primarily to promote their trading interests, with the erstwhile Madras Presidency serving as a vast hinterland for the port. Fortyfour years after independence, Madras Port continues to be the largest port on the eastern seaboard with links to the Far East and Pacific countries, apart from the traditional ties with Europe and West Asia. With an enviable location and a well - connected transportation network, the port has tremendous potential for traffic growth.

World-wide advances in shipping technology have had their impact on Indian ports. Containerisation of cargo sometimes referred to as a revolution in freight transportation, is gradually changing the character of port operations. Madras Port has taken the lead in constructing a container terminal, and incorporating containerisation as an integral part of its modernisation programme.

In this paper, we briefly describe the historical development of Madras Port, and in particular the container terminal. We then discuss the concept on containerisation, and the constraints in the Indian context, before presenting some data from published sources on the growth of container traffic at Madras Port. This study is intended only as a preliminary survey of container operations, in order to identify potential areas for further research in the broader fields of port economics and management. Of particular interest is the role of the port in the economic development of the Madras Metropolitan Area.

I

Background of Madras Port

Unlike many of the ports across the world, Madras Port was not endowed

or designed by nature. In fact, maritimers viewed it as a liability because it was heavily infested by sharks, and the continental shelves were sandy and sloping. The coast was also frequently hit by cyclones during the monsoon season. Ships had to anchor two miles away, and the cargo had to be transported from ship to shore by "Masula" boats.

It was in the middle of the nineteenth century that the harbour was designed and built, and after many delays, Madras Port was commissioned in 1985. The port came of age only in the first decade of the twentieth century when a number of additional facilities and remodelling schemes were introduced by Sir Francis Spring. Madras became a major commercial port in which steamer vessels of 10,000 tons could dock. No other major developments were introduced until independence. The volume of cargo handled by Madras Port remained at around 2 million tons per year (Tirumalai, 1986).

After independence, a number of technological improvements were undertaken to improve the capacity and efficiency of the port. Since the entrance to the harbour was blocked by the littoral drift of sand, a reliable dredger was obtained. Additional handling equipment, a transit shed, and a passenger station were built during the fifties. In the next decade, a floating crane, a wet dock, and mechanised ore and coal handling facilities were introduced. In 1972, an outer harbour with the "Bharathi" Dock was commissioned, while an export cargo complex was built a few years later (Tirumalai, op.cit.).

In 1983, a fully equipped container terminal was commissioned. From 1985 onwards, expansion of the harbour and modernisation of the container terminal have been undertaken. During this time, Madras Port saw a further increase in its performance record. There was a tremendous rise in the volume of containerised goods from the time the container was inaugurated. Modernisation of the inland container terminal is now underway. (The physical aspects of Madras Port are given in Annexure I).

Madras Port Container Terminal

The container terminal which was commissioned on December 17, 1983 by the late Smt. Indira Gandhi, renders coordinated service with infrastructure and facilities, and operating efficiency matching international standards. Located in the Bharathi Dock of Madras Port, it can handle gearless cellular vessels of any size, container oriented vessels and combicarriers. The terminal commands a quay length of 380 metres with a draft of 12.8 metres.

It has a rated capacity of 80,000 containers (TEUs) per annum and is supported by an operational area of 1,21,000 sq. metres and a modern freight station. It is the first port in India to set up an "on—line" computer for ship and yard planning, tracking and billing.

The infrastructure and facilities were provided at a cost of Rs. 390 million. With the rapid increase in throughput of container traffic, Madras Port Trust has planned for acquisition of additional equipment, and for providing other infrastructure improvements at a cost of about Rs. 240 million. Important containerisable commodities at Madras Port include tobacco, coffee and tea exports, and steel imports (Administration Reports, 1981-1990).

II

Containerisation

Till the middle of this century, general cargo was transported by break bulk methods. Cargoes were loaded and unloaded manually at various ports and in the ships, and this resulted in inefficient utilisation of space in ships and an increased turn around time at the ports. Because of the disadvantages inherent in this method, the maritime community felt a need for a better and efficient method of cargo handling. Unitization of cargo was offered as a solution to this problem. Of the various methods tried out in unitization, one method namely containerisation developed quickly and has come to stay and promises to be the principal mode of cargo handling in the next half century. It is widely used for transportation over sea, rail, road or even air.

What is containerisation? The International Standards Organisation (ISC) defines a freight container to be an article of transportation equipment intended to facilitate the carriage of goods by one or more modes of transport without intermediate reloading. Thus, a container must be of permanent character, strong enough for repeated use; fitted with devices permitting ready handling by several modes of transport; and designed to be easy to fill and empty.

The primary advantages of containerisation are the rapid handling of cargo, and the possibility of not only port-to-port but door-to-door movement. Other advantages of containerisation include : Greater physical protection to the cargo from damage; less holding of stock and lower working capital requirements, and reduction in cargo claim liability (ESCAP, 1986).

There are also problems associated with containerisation, such as the high investment in cellular ships and container terminals; labour problems arising from displacement; and lack of coordination among agencies. Also, optimum use of the technology can occur only if there are multi-modal transport arrangements, i.e. it is necessary to develop a network of inland container depots and container freight stations. But, unfortunately containers rarely move beyond the port boundaries in most developing countries. (ESCAP, op. cit.).

Containers are usually made of steel, aluminium, plywood or fibreglass. The dimensions of most containers used are 8′ width x 8′ height x 40′ or 20′ length. The number of containers are quoted in terms of containers twenty feet in length—TEUs or twenty equivalent units. Ventillated containers are used to carry cargo like spices and coffee, refrigerated ("reefer") containers for frozen food products, open top containers for oversized and high density commodities like iron and steel, and tank containers to carry liquids.

Container services were introduced in 1955 by Sealand Services and Maston Navigators for U. S. Coastal movement. Containerisation has gradually spread worldwide as its operational and economical advantages have come to be recognized. By 1983, the container traffic worldwide exceeded 45 million. TEUs, with the United States accounting for more than a fifth, at 9.5 million TEUs. India stood 24th among countries

involved in container movement in 1983. (ESCAP, op. cit.).

Container Traffic at Indian Ports

Although India's share in world container traffic was only 0.51% in 1983, the number of containers handled at Indian ports has been growing as shown in Annexure II. In 1988-89, the container traffic had more than doubled from 0.24 million TEUs to 0 53 million. The decade of the eighties was clearly a period of rapid growth. Among the eleven major ports, only Bombay, Cochin, Madras, Haldia/Calcutta, and Kandla have the facilities to handle containers. However, there are provisions in the Eighth Five Year Plan to have container handling facilities at all 11 ports (Sinha, 1989).

Yet, container traffic at Indian ports has not reached the levels seen in major Asian ports like Singapore or Hongkong, for a number of reasons.

(1) Indian shipping lines, other than Shipping Corporation of India, are either too reluctant to bring about technical changes, or they do not have the resources and expertise.

(2) Workers at some of the ports do not have the skill and the willingness to accept the new technology.

(3) Small exporters cannot offer full container loads, and are not as yet capable of dealing with containerisation.

(4) There is no encouragement of land bridging between the hinterland and the ports i.e., lack of multi-modal network.

(5) Reluctance of shipping agents and forwarding agents to change from breakbulk to containerisation (Binay Kumar, 1986, Dayal, 1986).

The most important constraint to containerisation is the lack of a good net-work Inland Container Depots (ICDs) of which can feed the container terminals at the major ports. Currently, most containers are stuffed or destuffed at the ports and not in the ICDs.

Inland Container Depots

Penetration of containers from the ports to inland destinations is a logical extension of containerised movement of cargo. The operational versatility of containers has brought into effect the concept of "land bridging", that is, importing and exporting container cargo *directly* from the hinterland. Inland Containers Depots (ICDs) linked to gateway ports serve as "dry ports", where Customs examination of cargo is undertaken and clearance given so that these formalities are eliminated at the gateway ports. Thus, ICDs alleviate overloading of handling facilities within the terminal; fill the need for personal service which a large port cannot accommodate, because of its prime need to serve the requirements of the ship; and have a beneficial effect on the country or region. (Kappel, 1983).

In the Indian context, the major obstacles to setting up ICDs are: the paucity of inland infrastructure and customs clearance facilities; the high cost of

containers handling equipment; and the high cost of through transport from inland centres. Container transport is *not* an important part of the operations of the Indian Railways. In 1988-89, container cargo constituted only 0.5 million tonnes out of a total of 340 million tonnes transported by the Railways (Dayal, 1986). An analysis of cargo traffic flows by RITES indicate that there are approximately 100 locations in the country where container handling facilities could be considered. The study proposes a network of 23 ICDs and 71 container freight stations connected to the 11 major ports (Sinha, 1989).

ICDs linked to Madras Port include Bangalore, Coimbatore, Guntur and Anaparti. Sub-depots are proposed to be set up at Ranipet and Hosur in the near future. In the next section, we examine the container traffic data for Madras Port following the advent of containerisation in the early eighties.

III

Analysis of Container Traffic Data at Madras Port

This section deals with the data concerning import-export tonnage, number of containers handled, import-export commodities and financial aspects of containerised cargo. The data collected and tabulated pertain to the period 1981-1990. These data were collected from the Administration Reports of the Madras Port Trust.

Relevant figures regarding container traffic are shown in Table 1. It includes data regarding the number of containers (empty & stuffed) exported and imported, the cargo tonnage imported and exported in the past one decade. The figures in brackets are the percentage increase of a particular item over the previous year.

As can be observed all parameters show continuous increase over the time period except for 1987-1988 which shows a decrease in almost all the parameters. This trend is particularly welcome, since this is indicative of the shift from total break-bulk cargo movement to total containerisation movement. No specific reason were given in the Administration Reports for the decline in 1987-1988. A simple index has been formulated by taking the number of containers handled in 1981-82 as the base value (containers handled in 1981-82 correspond to a value of 100). As can be seen from the table there has been a six fold increase in the number of containers handled from 1981-82 to 1989-90. The new container terminal was inaugurated in December 1983 and for the next two years 1984-85 and 1985-86, there has been a tremendous increase in both the number of containers handled and in the cargo tonnage.

The Madras Port Trust had estimated that the total tonnage which would be handled in 1989-90, would be around 7,82,770. This indicates that the containerisation process has been carried

out at an impressive pace, outstripping even the most optimistic projections.

One interesting feature is that the incidence of empty container handling has shown a steady decrease over the period considered. This decrease reflects that there is increasing synchronization of imports with exports and vice-versa.

Table 2 shows the relevant figures regarding import of containerised commodities over the last four years. There were more than 45 products which were imported through the Madras Port. These products were suitably divided into 14 major categories. The figures indicated in brackets are the percentage contribution of the category to the total containerised imports.

Some of the main import categories in 1989-90 were paper & paper products, metal & metal products, chemical & pharmaceutical products, chemicals, machinery and food products.

The major products in the paper & paper products category were waste paper, imported from U. S. A., newsprint imported mainly from U. S. S. R. and miscellaneous paper products. Iron and steel products contribute about two—thirds of the total metal products imports while the remaining was accounted for by the non—ferrous metals. The main countries which export these products to Madras are U.S.A., U.S.S R., Japan and West Germany. As rgeards the chemical and pharmaceutical products, which are traditionally imported from U. S. A. and Japan, the main products are moulding powder, dyeing & tanning substances and miscellaneous plastic products. Chemicals are imported from U.S A and U.S S.R. and machinery is imported from Japan, West European countries and West Germany. The category food products consists of wheat, other cereals, edible oils which are mostly imported from U.S.A.

In 1989-90 the total cargo imports were 12,45,787 tonnes of which containerised cargo was 4,74,452 which is about 38%. However, it may not be economical to move certain commodities through containers whatever be the merit of containerisation.

Table 3 shows the figure regarding the export of commodities through Madras Port. As in the previous case there were more than 51 products and these were grouped under 16 major heads. The table shows the exports of these commodities for the past four years. The figures indicated in the brackets are the percentage contribution of that product to the total containerised exports.

Considering the year 1989-90, certain major categories deserve special mention. Fruits & vegetables is one of them. In this category, fruits & vegetables are exported mainly to U.S.S R., South Eastern countries and West Germany. Food products are alsoan important export commodity destined to the West European countries Important products are cashewnuts, appalam, pappads and plantation commodities & spices. Fibres also form another significant export category. The mainproduct which contributes a lion's share to this head is cotton goods which is exported mainly to U. S. A. and West European

countries and to a smaller extent to many other counties. Granite is a major export revenue earner and contributes about 18% of containerised exports: U S.A. and Japan import almost the entire bulk of granites exported from India.

In 1989-90, 4,78,813 tonnes of cargo were exported through containers out of the total 9,39,475 tonnes of cargo exported i.e. about 51% of the total cargo exported was done through containers.

Table 4 provides the income, expenditure and profit data arising out of containerisation at Madras Port. Income and expenditure through containers, total income and expenditure of the port, profits through containers, overall profits and relevant percentages are shown for the period 1982-83 to 1989-90.

The income and profit through containers have shown a phenomenal increase from 1982-83 to 1989-90. Another feature is that the contribution of profit through containers to total profit has increased from a mere 3% in 1982-83 to about 23% in 1989-90.

IV

Conclusions

The container terminal at Madras Port has been in operation for nearly a decade. The available data indicates that there has been a sixfold increase in the number of containers handled, and a twentysix fold increase in the profit earned through containers during this period. Moreover, the percentage contribution of the profit through containers, to the overall profit has shown a substantial increase every year. Also, the tonnage of individual import and export commodities have also shown an increase in the past four years. There has been a decreasing trend in the incidence of empty containers handling resulting from synchronisation of imports and exports through containers.

However, it may be premature to conclude that the efficiency of the port has improved through containerisation. A careful study on the costs and benefits of containerisation has to be undertaken before any general conclusions can be drawn. It has also been suggested that there are a number of conflicting interests with regard to container terminal productivity—that of the terminal operator the port authority, labour, and the carrier. Due to problems of data comparability, the only appropriate comparisons of productivity are at a single terminal over two or more time periods (Dowd and Lischine, 1990).

The issues specifically with regard to containerisation that need to be studied include :

1) The importance of the multimodal network—Can containerisation be successful or justifiable even in the absence of such a network?

2) Does containerisation result in the displacement of labour?

3) Should other unitization alternatives to containerisation be considered?

4) Are the institutional factors (union work rules, customs regulations, safety rules etc.) major barriers to containerisation?

5) Will Containerisation improve the competitive position of Indian Ports vis-a vis other ports in the region?

A detailed case study of containerisation at Madras Port can shed some light on these and other relevant issues.

Acknowledgements

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References

1. Binay Kumar (1986) "Progress on Containerisation—The Shippers' point of View ' in *Seminar on Containerisation*, Ministry of Transport and RITES, New Delhi.

2. R. Dayal (1986) ' Containerisation in Perspective", in *Seminar on Containerisation*, Ministry of Transport and RITES, New Delhi.

3. T. J. Dowd and T. M. Lischine (1990). "Container Terminal Productivity : A Perspective" in *Journal of Maritime Policy and Management*, Vol. 17, No. 2 pp107-112.

4. R. Kappel (1983) "Container Depot System" in *Proceedings of a Seminar on Containerisation*, Indian Institute of Port Management, Calcutta.

5. ESCAP (1986) "Containerisation/Unit loads on Economic and Commercial Implications for Shippers", *Country Level Workshop Report*, Dhaka, Bangaladesh.

6. Madras Port Trust (1981-1990) *Administration Reports*

7. V.K. Sinha (1989) "Inland Container Depots—Bringing the Port Inland", Presented at the *Second World Container Congress*, Hong Kong.

8. R. Tirumalai (1986) *The Voice of Enterprise*, Macmillan India, Ltd., Madras.

Table 1

Container Traffic (MPT)

	81-82	82-83	83-84	84-85	85-86	86-87	87-88	88-89	89-90
Import Containers									
Empty (TEU)	2523	2299	4287	5635	5152	6494	8773	5880	9302
Stuffed (TEU)	5883	6785	8207	15323	33628	41076	34617	39401	38767
Total (TEU)	8406	9084	12494	20958	38780	47570	43390	45281	48078
Cargo Tonnage (tonnes)	79776	99818	105705	174508	375282	470265	458274	500619	489761
Export Containers									
Empty (TEU)	1897	2827	2282	3979	10909	10053	8424	10761	7579
Stuffed (TEU)	4777	6646	10381	15673	27568	36674	34414	34610	40126
Total (TEU)	6674	9473	13663	19652	38477	46727	42838	45371	47705
Cargo Tonnage (Tonnes)	61334	96969	103058	166994	304824	420021	444307	459390	492917

Total Containers		(15.9)	(28.1)	(46.3)	(67.0)	(3.0)	(3.9)	(-3.2)	(1.4)
Total Empty Containers (TEU)	4420	5126	6569	9614	16061	16547	17197	16641	16881
Total		(25.9)	(38.4)	(66.7)	(47.4)	(27.0)	(-11.2)	(7.2)	(6 5)
Stuffed Containers (TEU)	10660	13431	18588	30996	61196	77750	69031	74011	78892
Grand		(23.0)	(35.5)	(61.4)	(90.2)	(22.0)	(-8.5)	(5.1)	(5.6)
Total (TEU)	15080	18557	25157	40610	77257	94297	86228	90652	95773
Total		(39.4)	(6.0)	(63.5)	(99.1)	(30.7)	(1.3)	16.3)	(2 3)
Cargo Tonnage (tonnes)	141100	196787	208763	341502	680111	890286	902581	960009	982678
Incidence of Empty Container handling	29 31	27.62	26.11	23.673	20.78	17.547	19.94	18 35	17.62
Index	100	123.05	166.82	269.3	512.3	625.31	571.8	601.14	635.09

Note : The number of total Containers included transhipment containers.

Table 2

Imports Through Containers (MPT)

		1986-87	1987-88	1988-89	1989-90
1.	Fibres	(1.4) 3896	(2.5) 7711	(6.6) 26354	(2.6) 13302
2.	Wood & Wood products	(0.3) 712	(0.1) 176	(1.6) 6522	(1.4) 6642
3.	Paper & Paper products	(4.1) 11516	(4.5) 14612	(14.3) 56861	(16.1) 76426
4.	Leather & Leather products	(0.4) 1188	(1.4) 4221	(2.4) 9695	(1.4) 8935
5.	Rubber & Coal	(4.5) 12614	(6.7) 20382	(7.2) 28671	(4.7) 22471
6.	Chemicals	N.A	N.A	(9.8) 38958	(9.4) 44407
7.	Chemicals & Pharma-ceutical products	(4 3) 12004	(7.8) 23773	(15.3) 60773	(17.4) 82547
8.	Food products	(7.3) 20390	(4.7) 14415	(12.4) 49372	(5.3) 24965
9.	Machinery	(10.2) 28283	(7.6) 23283	(5.0) 20017	(8.0) 38134
10.	E. Machinery & Transport Equip.	(7.2) 20152	(7.2) 21934	(4.3) 17142	(4.1) 19644
11.	Beverages & Tobacco	N.A	N.A	(0.6) 2239	(0.7) 3337
12.	Minerals & Non Metals	(4.9) 13609	(4.9) 15037	(4.6) 15928	(2.7) 12835
13.	Metals & Metal products	(10.8) 29983	(13.5) 41261	(13.6) 54758	(15.8) 75087
14.	Others	(44,5) 124069	(39.2) 119634	(2.5) 9983	(9.6) 45720
Total		278505	3054391	397262	474452

Note: All figures are in tonnes. Data for 86-87 & 87-88 are not comparable with those of 88-89 & 89-90, since a detailed breakdown of commodities was not available for the earlier years.

Table 3
Exports Through Containers (MPT)

		1986-87	1987-88	1988-89	1989-90
1.	Fish & Fish products	N.A	N.A	(3.3) 11292	(2.4) 11541
2.	Vegetables	(10.2) 23411	(7.2) 21173	(9.7) 33371	(13.6) 65084
3.	Food products	(2.0) 4539	(1·0) 3080	(3.5) 12160	(3.1) 14912
4.	Beverages & Tobacco	(7.5) 17807	(4.1) 12236	(2.7) 9354	(3.3) 15636
5.	Fibres	(7.5) 17296	(16.2) 47920	(13.2) 45489	(13.4) 63935
6.	Rubber	(3.6) 8245	(2.4) 7056	(2.1) 7389	(2.7) 12830
7.	Animal products	(2.5) 5670	(2.1) 6078	(2.5) 8586	(1.7) 8211
8.	Leather products	(4.7) 10845	(3.6) 10505	(3.3) 11564	(3.0) 14567
9.	Chemicals	(1.5) 8524	(2.8) 8230	(3.2) 11102	(3.4) 16479
10.	Chemical Pharmaceutical prod.	(0.7) 1718	(0.9) 2630	(0.6) 2075	(0.6) 2921
11.	Machinery & Tools	(2.4) 5418	(0.7) 2135	(2.0) 6803	(1.9) 9073
12.	E. Machinery & Transport Equip.	(2.5) 5810	(1.4) 4063	(2.3) 8083	(2.7) 12771
13.	Minerals & Non Metals	(0.7) 1598	(1.1) 3169	(4.3) 14735	(3.9) 18870
14.	Metals	(0.9) 1961	(1.8) 5306	(7.9) 27163	(5.3) 25378
15.	Granites	(17.3) 39047	(22.6) 66909	(22.7) 78352	(18.6) 89075
16.	Others	(36.0) 82461	(32.2) 95139	(16.7) 57838	(20.4) 97530
	Total	2292324	295626	345356	478813

Note : All figures are in tonnes. Data for 86—87 & 87—88 are not comparable with 88—89 & 89—90, since a detailed breakdown of commodities was not available for the earlier years.

Table 4

Income, Expenditure and Profits Through Container Traffic (MPT)

	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90
Income Containers (Rs)	11142687	36458909	97409318	126751637	168441259	154452332	189200173	24165430
Total (Rs)	474350136	530694287	814327270	911813856	970549778	1016253739	1216860671	1310066282
% Income thru. Containers	2.35	6.86	11.96	13.89	17.35	15.19	15.54	18.44
Expenditure Containers (Rs)	3586799	14790998	27366408	31907307	34259882	43395489	43988639	46362661
Total (Rs)	271032753	295306619	353373333	371635083	398710492	428346617	46821484	502092130
% Expenditure thru. Containers (Rs)	1.32	4.97	7.72	8.58	8.57	10.11	9.37	9.22
Profit thru. Containers (Rs)	7555888	21667911	70042908	94844330	134181377	111056843	145211534	195289769
Overall Profit (Rs)	203317383	235387668	460953937	540178773	571839286	587907122	748645830	807924152
% Profit thru.* Containers	3.71	9.21	15.20	17.56	23.46	18.89	19.40	24.17

Annexure—I

Madras Port—At a Glance

Madras port is an artificial port located in 13° 6'N, 80° 18'E. It is a major East Coast port on low sandy coast with shelving beach depth 2 miles out. The area covered under this port :

Inner Harbour	—	Water spread area	:	220 acres
		Land area	:	441 acres
Outer Harbour	—	Water Area	:	200 acres
		Land area	:	145.96 acres

The storage capacity of the port :

Type		Area
Covered		
	1. Warehouse	65,685 sq.mtrs.
	2. Transit sheds	47,841 sq.mtrs.
	3. Covered area for containers	43,450 sq.mtrs.
	4. Container freight station	6,300 sq.mtrs.
Open		
	5. Open space	3,25,000 sq.mtrs.
	6. Container Parking Yard	61,000 sq.mtrs.

Annexure—II

A. Total Container Traffic Handled at Indian Ports

Year	Traffic in TEU's
1975—76	9745
1976—77	9305
1977—78	16987
1978—79	44429
1979—80	94806
1980—81	116610
1981—82	165490
1982—83	175670
1983—84	239000
1984—85	296000
1985—86	396000
1986—87	399416
1987—88	480000
1988—89	531351

Source : V. K. Sinha (1989) "Inland Container Depots—Bringing the Port Inland".

B. Container Traffic by Port (1985—86)

Port	Traffic in TEUs
Haldia	8000
Bombay	214000
Cochin	39000
Madras	69000
Calcutta	46000
Total	396000

Source : R. Dayal (1986), "Containerisation in Perspective".

Annexure III

Glossary

Break Bulk cargo : This is also known as general cargo and is the traditional method of transporting cargo without the use of containers.

Cellular Vessels : A ship specially designed to carry containers. The hold or cells are so arranged to accommodate containers in a vertical line.

Combi-carriers : Ships carrying both containers and Break bulk cargo.

Container Terminal : A facility which provides a package of activities and services to handle and control container flows from vessel to rail or road and vice versa.

Empty Containers : Containers without any cargo which is moved from one place to another for loading. This cannot be avoided because a limited number of containers are available in the pool for use by members of ISO and exports cannot always be synchronized with imports and vice-versa for a given port within a reasonable period of time.

Hinterland : The inland areas near a port which it serves for the sea-borne trade.

Incidence of Empty Container Handling : It is expressed as a percentage of number of empty containers to the total number of loaded containers plus empty containers.

TEUs : Twenty Equivalent Units in which all containers are generally quoted in terms of 20′ container is equal to two TEUs and a 30′ container to 1.5 TEUs.

Throughput : The throughput of containers is expressed in terms of numbers of cargo handled (TEUs) and the containerised cargo in tonnes.

Summary of Discussion

The paper presented by Dr. Paul Appasamy deals with the development of Madras Port and containersation of cargo transport. In order to increase the efficiency of cargo handling several methods of unitization have been tried and containerisation has come to stay since the middle of this century.

Containerisation has resulted in the standardisation though not a single standard has come to stay, and increase in the speed of cargo handling. However, it is difficult to conclude that the efficiency of port has improved through containerisation. At this stage it is premature to conclude on the efficiency of containerisation as the various dimensions of the problem are yet to be analysed.

Several constraints on containerisation have been noted by the author. Containerisation warrants the development of multimodal network. The interland container depots have to be developed to feed the terminals at the port. Further, standardisation of containers decides the mode and type of both inland and ship transport, which requires investment in various related sectors of the economy. Another constraint on containerisation noted by the author, is the indivisibility of container space which hinders the utilisation of containers by small exporters. However, the chairperson has pointed out that it is no longer a problem as several shipping agents arrange for sharing of the containers.

The issue of displaced workers and training of personnel to cope with increasing specialisation as a result of containerisation merits attention. Dr. C. Chendroyaperumal chaired the Seminar.

V. Jacob John

Some Notes on Employment and Unemployment*

Rate of Economic growth and rate of Employment growth

One of the peculiar features of the economy that has come to light, particularly in the VI and VII Plans is the coexistence of high rates of growth and declining rate of employment. At the macro level, it is noted that, while the trend rate of growth of the economy during the two plans was 5.3 per cent[1], and that of industry even higher at 8 per cent, the growth rate of employment has declined from 2.8 per cent to 1.51 per cent during that period. The rate of growth of unemployment usual (status) increased from 2.77 per cent to 3.77 per cent during the period.[2]

Agriculture

At the disaggregated level, the above trends in the decline in employment is even more disturbing. Even as we have been expressing satisfaction at higher level of agricultural production and attaining a level of foodgrain production which avoids their imports, the growth rate in agricultural employment is declining drastically from 2.32 per cent in 1972-73 to 1977-78, to 1.20 per cent in 1977-78 to 1983 and to a very low of 0.65 per cent in the prime 1983 to 1978-88[3]. The major reason *for this is that the regions with a high* rate of growth of output such as Punjab, Haryana, Uttar Pradesh show shrinking labour use per unit of output. In Punjab a one percent growth in agricultural output is accompanied by nil (0.00 per cent) growth of employment and so too are the employment records in other high output regions. This means that to generate employment and to enable agricultural and allied activities to absorb about 50 per cent of the 65 million who constitute the backlog from the VII Plan and the labour force entrants forecast during the coming 5 years the following is suggested.

— Foodgrains production should be developed in the non green revolution areas and dry farming lands comprising West Bengal, East Uttar Pradesh, Orissa, Assam, Rajasthan, Maharastra, Tamil *Nadu, Telingana and Rayaleseema* regions of Andhra Pradesh, Karnataka and Kerala, with rather heavy investment in irrigation—Medium and Minor—which is itself employment intensive;

Concentrated development of animal husbandry and fisheries which can provide additional employment for 5 million to 8 million persons;

—Development of high value production of vegetable, fruits and other horticultural crops, sericulture and intensification of cash crops—jute and mesta, cotton and oilseeds, which are all employment generating.

Together, these diversified above two agricultural developments can absorb about 30 per cent of the work force awaiting employment.

Small Industry

Turning next to the employment record of the small industry sector, the data

* A note by Dr. Malcolm S Adiseshiah for the Planning Commission, New Delhi, Feb. 12, 1991.

shows a somewhat mixed trend, of employment growth declining by about 40 percent over the VII Plan period. This is mainly because under the generic breed of small industries is included the capital intensive modern units (using increasingly NC/CNC machine tools), most of which are benami units of large enterprises, as well as the traditional small industries, the tiny industries and the khadi and village industries. It is the latter group which is employment generating at around 8 per cent during VII Plan. This group of small industries, the traditional ,the village, the tiny, can, if they are required to, produce the major part of mass consumption goods, can increase employment by a net 10 per cent per annum —(losing about 2 per cent of their employment generation through increased and improved productivity which is also needed in this sector). This part of the small industry sector which includes the unorganised urban employment sector can absorb 15 per cent of the workforce awaiting employment.

Organised Industry

Finally taking up organised industry at the disaggregated level, it is found that some capital (as well as import intensive) industries have low employment generation in relation to their output. These are the industries which have recorded the highest rates of growth in the 80s , such as automobiles industry and the electronics industry. On the other hand there are industries which have better employment potential —of 0.50 to 0.70 for every 1 unit of output. These include handloom and powerloom textiles and toilet products generally, food processing industries, including fish preservation and canning, and dairy production as counter—part to development of animal husbandry, fisheries and horticulture proposed under agriculture earlier, khandasari and gur products, edible oil processing, leather products, all kind of handicrafts. The intensive development of this group in the organised sector can absorb 3 per cent of those awaiting employment.

Educated unemployment

The problem of educated unemployment, as it affects the 3.2 million out of the 32 million job seekers registered at the Employment Exchanges at December 1989, is multifaceted.

First, there is not only the problem of open unemployment in this group which characterises the majority of the educated unemployment, there is also the misemployment and underemployment which characterises this group. A recent survey shows that around 25 per cent of those registered in employment exchanges are not unemployed much as misemployed. They are already employed but not in occupations for which they have been trained/educated. This group, being employed represent a wastage of the investment in their education — and can be employed in occupations for which they are trained as and when the economy in their occupation expands. But this is not a priority.

Second, there is the group of those who have a general arts and science education and who are looking for a job. This group needs to be trained in special skills and given a start as TRYSEM does, for self employment.

Third, and probably most serious is the unemployment of highly trained scientists and technologists because their annual

output is not in accord with the demand for them. A recent study by the Department of Science and Technology[6], for instance, reports that agricultural scientists are in surplus by 22 per cent in 1990-91 but will decline to 12 per cent by 2000-2001 : in engineering and technology there is a surplus of 3 per cent in 1990-91 which will increase to 8 *per cent in 2000-2001. Similar data* is provided for medical manpower, food technologists, electronic or tele-computer science specialists. This is a difficult area to deal with. For the future demand can be estimated by making clear assumptions of the rate of growth of the economy and of each occupation, which depends on a whole set of variables, the rate of capital investment, the new technologies being developed, management practices etc. But this kind of estimate needs to be made and the education and training intake of the scientists and technologists in universities and institutes adjusted to them, as this is a source of personal frustration, the *most expensive investment in societal* terms and is one of the major causes for the brain drain.

REFERENCES

1. National Account Statistics 1980-81 to 1989-90. New Delhi, 1990.

2. National Sample Survey, 32nd, 38th & 48th rounds. New Delhi, 1978-79 & 1987-88.

3. Economic Advisory Council : Inter Report. New Delhi, 1989.

4. Employment : Working Paper. Planning Commission, New Delhi, 1990.

5. Survey of eduated job seekers in Karnataka. Univeisity of Mysore, 1987.

6. Scientific Manpower : Annual Report for 1989-90. Department of Science and Technology. New Delhi, 1990.

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